

# TROPICAL AMERICAN PLANTS, XIII

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## BIGNONIACEAE

PSEUDOCALYMMA. - Mr. Sandwith has reviewed the status of Pseudocalymma alliaceum (Lam.) Sandwith (Kew Bull. 1953: 466. 1954). Lamarck's original specimen is sterile. Mr. Sandwith believed that there were two varieties of this species, based primarily on calyx size, but was unable to ascertain which one might go with the type. He used a novel procedure to solve his problem, describing var. microcalyx and var. macrocalyx since he was not able to determine which might have been var. alliaceum.

If it were necessary to solve the problem in this manner I believe Pseudocalymma alliaceum (Lam.) Sandwith (Bignonia alliacea Lam.) might well have been considered a nomen dubium, which it is, and the next available name taken up. The next available name is P. sagotii (Bur. & Schum.) Sandw. and this name I take up for use in the Flora of Guatemala, as follows:

PSEUDOCALYMMA SAGOTII var. SAGOTII. P. sagotii (Bur. & Schum.) Sandwith, Rec. Trav. Bot. Néerl. 34: 210. 1937. Adenocalymma sagotii Bur. & Schum. in Martius, Fl. Bras. 8(2): 110. 1896. A. macrocarpa Donn.-Sm. Bot. Gaz. 40: 9. 1905. A. hosmeca Pittier, Contr. U. S. Nat. Herb. 18: 256. 1917. Petastoma tonduzianum Kränzlin, Fedde Rep. Sp. Nov. 17: 56. 1921. Pseudocalymma macrocarpum Sandwith, Rec. Trav. Bot. Néerl. 34: 210. 1937. P. alliaceum var. microcalyx Sandwith, Kew Bull. 1953: 467. 1954.

PSEUDOCALYMMA SAGOTII (Bur. & Schum.) Sandwith, var. macrocalyx (Sandw.) L. Wms., comb. nov. P. alliaceum var. macrocalyx Sandwith, Kew Bull. 1953: 468. 1954. P. standleyi Steyerf. Field Mus. Bot. 23: 235. 1947.

This variety with large calyces is sparsely, and erratically, distributed from Guatemala to British Guiana and Brazil.

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## COMPOSITAE

GNAPHALIUM AECIDIOCEPHALUM (Grierson) L. Wms. comb. nov.  
Anaphalis aecidiocephala Grierson, Notes Roy. Bot. Gard. Edinb. 31: 389, fig. 1972.

Mexico: in grass in sun, Cerro de Humo Chico, Comaltepeque, Ixtlán, Oaxaca, alt. 3,050 m., March 2, 1968, MacDougall 4129.\*

The collection cited above, which will be widely distributed, is from the same locality and collected on the same day as the holotype of the species; only the collection number is different.

Mr. Grierson has placed this most attractive species into DeCandolle's genus Anaphalis, the lectotype of which is Indian. He has transferred Gnaphalium concinnum Gray, a similar and rare Mexican species, to Anaphalis. There are as many as a half dozen Mexican and Guatemalan species that would need to be transferred to Anaphalis if Gnaphalium concinnum and G. aecidiocephalum were to be considered to belong to this segregate genus, and then by extension perhaps many more allied species. I consider it preferable to maintain the plants in Gnaphalium since there is no real assurance that these plants belong to the segregate genus.

## ORCHIDACEAE

PONTHIEVA PARVULA Schltr. in Fedde, Rep. Sp. Nov. 10: 394. 1912; Rep. Sp. Nov. Beih. 59, 2: t. 7, f. 28. 1931.

Guatemala: near Cobán, Alta Verapaz, Dec. 1879, Tuerckheim 484 (type collection); flowers white, growing on moist bank, cut-over and second growth forest, hills about 5 km. north of San Pedro Carchá, Alta Verapaz, approx. 15° 32' N, 90° 15' W, alt. 1,200 m., January 28, 1969, Williams, Molina, Williams & Molina 40223; flowers white, growing on moist rocky bank, cut-over pine forest and moist thickets, hills of Chicojil, about 10 km. north of San Pedro Carchá, Alta Verapaz, ± 15° 32' N, 90° 12' W, alt. 1,200 m., February 2, 1969, Williams et al. 404

The type of this rare species was probably lost at Berlin. Our collections, the first in 90 years, have been widely distributed to herbaria around the world. They come from the same general location as the original collection made by Tuerckheim in 1879.

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\* Thomas MacDougall, don Tomás to a host of friends, for whom I had planned to name this plant, died at Oaxaca, Mexico, in the country which he loved, on January 17, 1973.

## SPIRANTHES PETENENSIS L. Wms. sp. nov.

Plantae terrestres. Folia dua vel ultra e base plantarum, laminae ellipticae oblanceolatae vel oblanceolato-ovatae acuminatae; inflorescentia racemosa pauciflora, bractae lanceolatae; flores parvi albi; sepalum dorsale lanceolato-acutum obscure trinervium; sepala lateralalia anguste oblonga acuta obscure trinervia; petala oblique oblanceolata bilobata obtusa 1-(2)-nervia; labellum anguste oblanceolatum obtusum callosum; rostellum trilobatum.

Terrestrial plants with 2 or more basal leaves and a slender, puberulent stem 15-25 cm. long, this terminated by a 10-20-flowered spikelike inflorescence. Leaves elliptic, oblanceolate or oblanceolate-ovate, acuminate, glabrous, thin and net-veined, petiolate, the blade 5-12 cm. long and 2-5 cm. broad and decurrent onto the 3-6 cm. long petioles; stem to 25 cm. long, covered with loose translucent bracts 2-4 cm. long, the inflorescence a loosely flowered spike 6-12 cm. long, subtending floral bracts lanceolate, acuminate, 8-15 mm. long; flowers small, white, cystoliths present; dorsal sepal lanceolate, acute, about 4 mm. long and 1.5 mm. broad, obscurely 3-nerved, puberulent dorsally; lateral sepals narrowly oblong, acute, long decurrent on the ovary, 5-6 mm. long, 2-(3)-nerved, obscurely puberulent dorsally; petals lightly adnate to the dorsal sepal, obliquely oblanceolate, the apex obscurely bilobate or obtuse, 1-(2)-nerved, about 4 mm. long and 1.2 mm. broad; lip narrowly oblanceolate, obtuse, about 5.5 mm. long and 1.2 mm. broad near the apex, the base with thickened marginal callosities about 1.5 mm. long, the lamina constricted above the base and again near the apex, with obscure callus-thickenings toward the apex; column about 2 mm. long and the column-foot about 2 mm. long; rostellum trilobate, thin, about 1.2 mm. long, the mid-lobe linear.

Guatemala: flor blanca, en bosque alto, ramonal-sapotol, en camino a Uaxactun a 1 km. de Tikal, Parque Nacional, Depto Petén, 6 enero 1969, Tun Ortiz 3 (type, F; EAF; others).

Closely related to S. cranichoides (Griseb.) Cogn. and to S. elata (Sw.) L. C. Rich. from both of which it is easily distinguished by the narrowly oblanceolate lip with marginal callus thickenings, by the lobate apices of the petals, the lateral sepals long decurrent on the ovary and the column-foot as long as the column. A forest species bearing leaves at anthesis.

The Orchidaceae is doubtless the best known and the most collected family of plants in Guatemala, as it is in other Central American countries. This is due, in part at least, to many amateur and professional botanists who have had a special interest in the family. Nevertheless, undescribed orchids turn up in nearly every large collection that comes in.

Forest orchids, whether terrestrial or epiphytic, are especially sensitive to changes in the environment and certainly many are becoming extinct with the increasing destruction of tropical forests everywhere.

## RUBIACEAE

ALLENANTHUS HONDURENSIS var. PARVIFOLIA L. Wms. var. nov.

Folia breviter petiolata, laminis lanceolatis vel ovato-lanceolatis acuminatis; corolla subcampanulata 4-lobata prope 2 mm. longam, lobis oblongo-ovatis obtusis prope 1 mm. longos.

Differs from the species in being smaller in most parts, the leaves short-petiolate, the blades lanceolate or ovate-lanceolate, acuminate, puberulent on both surfaces, 3.5-5.5 cm. long and 1.5-2.5 cm. broad; corolla subcampanulate, 4-lobate, about 2 mm. long, the lobes oblong-ovate, obtuse, about 1 mm. long; stamens inserted in the throat, the anthers 4, sessile, 0.5-0.6 mm. long; style bifid, equalling the corolla.

Mexico: flowers white, tree 20 feet tall, Rancho Carmen along road from Acala to Venustiano Carranza, Municipio de Venustiano Carranza, Chiapas, alt. 2,600 feet, 23 August 1966, Laughlin 1647 (type, F).

We find no differences from the Honduran specimens except that the Mexican specimen has much smaller leaves and inflorescences; the fruits seem identical. The separation in range is great and the genus is new to Mexico.

The genus is now known, so far as I am aware, from three limited localities: Valle de Anton in Panama, the Zamorano and Los Angeles valleys in Honduras, and from a single collection in Mexico. It is to be expected in Guatemala, and also in Nicaragua and Costa Rica on the Pacific slopes.

CHIONE ALLENII L. Wms. sp. nov.

Arbor 12-25-metralis omnino glabra. Folia elliptico-oblonga vel ovata obtusa subcoriacea, nerviis lateralibus utroque latere 8-10; inflorescentiae terminales pauci-multiflorae cymoso-corymbosae; hypanthium clavatum; calyx 5-lobatum, lobi late triangulares vel rotundati; corolla infundibuliformis leviter carnosa, lobis imbricatis late ovatis obtusis; stamina 5 lineari-oblonga; fructus anguste ovoideus.

Forest trees 12-25 meters tall and 30-45 cm. in diameter; branches glabrous, internodes on new growths 2-7 cm. long. Leaves elliptic-oblong to ovate, obtuse, subcoriaceous, lateral nerves mostly 8-10 pairs, completely glabrous except around cavities in nerve axils on lower leaf surface, the blades mostly 8-17 cm. long and 4-8 cm. broad, petioles mostly 1-1.5 cm. long; inflorescences terminal, (few-)many-flowered

corymbose cymes, shorter or about as long as the subtending leaves; flowers white, fragrant; hypanthium clavate; calyx 5-lobate, about 1.5-2 mm. long, the lobes broadly triangular or rounded, about 1 mm. long, persistent; corolla infundibuliform, somewhat fleshy, the lobes imbricate in bud, about 1 cm. long, the tube about 5 mm. long, the broadly ovate obtuse reflexed lobes about 5 mm. long; stamens inserted below middle of the corolla tube, filaments about 5 mm. long, anthers dorsifixed near the middle, linear-oblong, 4-4.5 mm. long; style bifid, the lobes flattened and stigmatic on inner faces; fruits narrowly ovoid, 1.5-2 cm. long and 0.5-0.8 cm. in diameter, bright red at maturity.

Costa Rica: fruits red, tree 50 feet, vicinity of Palmar Sur, alt. 100 feet, March 27, 1950, Allen 5506; fruits red, in pendulous clusters, tree 80 feet tall, esquinas forest, area between the Río Esquinas and Palmar, alt. 100 feet, July 8, 1949, Allen 5321; "fruta de pava," fruits red when mature; flowers white, tree 60-75 feet, frequent in forest, forested hills above Palmar Norte, alt. 830 m., Feb. 17, 1951, Allen 5930; flowers white with yellow stamens, very fragrant, tree to 40 feet, infrequent, forested hills near Golfito de Golfo Dulce, Provincia puntarenas, alt. 30 m., March 3, 1951, Allen 5990 (type, F).

This species is known only from near Golfo Dulce and was doubtless originally misdetermined by me as Chione costaricensis Standl. when Mr. Paul H. Allen had his "The Rainforests of Golfo Dulce" (Univ. of Florida Press, 1956) in preparation. Two of these specimens cited are mentioned on page 172 of Mr. Allen's work.

Chione allenii is related to C. costaricensis but is easily distinguished by the larger elliptic-oblong to ovate obtuse leaves, not elliptic-ovate or lanceolate short acuminate ones; by 8-10 pairs of lateral nerves, not 5-8 pairs; lateral nerves with ciliate formicaria in the axils, not glabrous; by the broadly triangular or rounded calyx lobes, not rotund-oblong ones. This species is known only along the Pacific slopes while C. costaricensis is known from the Atlantic slopes of Costa Rica and Nicaragua. Both are known from but few collections.

Standley commented in 1940 when he described Chione costaricensis that it was the first species from Central America. There are now six species known from Central America and Panama.

COCCOCYPSELUM HIRSUTUM var. GLABRUM (Bartling ex DC.) L. Wms. comb. nov. C. glabrum Bartling ex DC. Prodr. 4: 397. 1830. Tontanea glabra Standl. Journ. Wash. Acad. Sci. 15: 104. 1925.

A glabrous variation of C. hirsutum Bartling ex DC. known to me to occur in Guatemala, British Honduras, Nicaragua and Panama. The two known collections from Guatemala and Nicaragua were mixtures of the typical hirsute variety and the glabrous variety. I presume that

the variation is a minor genetic one. Since Coccocypselum hirsutum and C. glabrum were published in the same place and since the pubescent condition is the usual one in the genus, C. hirsutum is chosen as the typical one, var. hirsutum, and C. glabrum is reduced to var. glabrum.

HOFFMANNIA SESSILIFOLIA L. Wms. sp. nov.

Frutices graciles glabri usque ad 3 m. alti. Folia sessilia base obtusa subauriculata vel subcordata, oblanceolata vel oblongo-lanceolata acuminata; inflorescentiae axillares pauciflorae perbreves; calyx usque ad basem divisus, lobi lineari-oblongi sparse pubescentes; corolla 4-lobata, lobi lanceolati vel lanceolato-oblongi acuti; fructus desideratur.

Erect, slender, sparsely branched glabrous shrubs to 3 m. tall. The branches slender, terete with inconspicuous longitudinal raphides, the internodes at maturity 6-10 cm. long; leaves opposite, equal, rather large, sessile and obtuse to subauriculate or subcordate at the base, oblanceolate or oblong-lanceolate, acuminate, 5-16 cm. long and 2-5.5 cm. broad, green above, bright purple beneath but apparently becoming greener with age, the lateral nerves 10-14 on each side, appearing somewhat white-marginate with age; inflorescences short, few-flowered axillary cymes, the peduncles 0.2-1 cm. long; flowers tinged with red; calyx and hypanthium 5-6 mm. long, the hypanthium 2-3 mm. long, glabrous, 8-ridged, the calyx divided to the base, the lobes linear-oblong, acute, 2.5-3 mm. long, sparsely pubescent or ciliate with segmented hairs, with minute glandular or hairlike appendages in the sinu; corolla 4-lobate, the lobes lanceolate or lance-oblong, acute, 6-7 mm. long, sparsely pubescent dorsally with large segmented hairs, the tube 3-4 mm. long; stamens attached below the throat of the corolla, 4-4.5 mm. long; style 9-10 mm. long, the stigmas somewhat enlarged and bilobate; fruits not known.

Guatemala: flowers tinged with red, leaves purple underneath, shrub to 3 m. on forest floor, wet cloud forest, Sierra de la Minas about 5 km. south of Furulhá, Dept. Baja Verapaz, alt. 1,600 m., January 2, 1973, Williams, Molina & Williams 41977 (F, type; EAF; US; others).

This is an addition to the rather numerous and often geographically restricted endemic species of the wet forests of the Central American highlands. The relatively little known genus Hoffmannia is one of the large genera in Central America with the greatest concentration of species occurring in Guatemala.

Hoffmannia sessilifolia has its nearest relative in H. ghiesbreghtii which is known from the same general region and extending to Mexico. Both are characterized by sessile or nearly sessile leaves, the only



species of North America lacking prominent petioles. Hoffmannia sessilifolia has sessile and usually very obtuse to subcordate leaves; the corolla tube half as long as the lobes which are pilose dorsally, the stems are terete. Hoffmannia ghiesbreghtii has sessile leaves but the base is long-attenuate and sometimes appears petiolate; the corolla tube is shorter than the lobes but glabrous and relatively small; the stems are winged.

The locality of this collection, made only three months ago, on the wet north slopes of the Sierra de las Minas, has probably not been visited by a botanist. A new road now makes it accessible to botanists, wood cutters, and lumbermen. The beautiful cloud forest certainly will all be gone within ten years, not because of excessive botanizing.



Hoffmannia sessilifolia. Illustration from the type to show variation in leaves; dissection to show detail of flowers.